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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/688,376 | 10/11/2000 | Fanny Barbotin | A33600-070337.0214 | 5867 |

21003 7590 04/23/2003

BAKER & BOTTS
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EXAMINER

PASTERCZYK, JAMES W

| ART UNIT | PAPER NUMBER |
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1755

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/688,376

Applicant(s)
Barbotin et al.

Examiner
J. Pasterczyk

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1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/11/01, 10/11/00
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 1-23 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5, 7 6) ☐ Other:

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1. This Office action is in response to the IDS and priority papers filed 10/11/00 and 1/11/01.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-20, drawn to a catalyst and method of making it, classified in class 502, subclass 102 inter alia.
- II. Claims 21-23, drawn to a diene polymerization process, classified in class 526, subclass various depending on the particulars of the catalyst used.

3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product, such as an unsupported catalyst or a Ziegler-Natta catalyst.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Michelle LeCointe, Esq., on 6/8/01, a provisional election was made with traverse to prosecute the invention of group I, claims 1-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 21-23 are

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withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The abstract of the disclosure is objected to because it should be amended in the manner set forth below for the claims. Correction is required. See MPEP § 608.01(b).

8. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 9, 12 and 13, it is not clear if the metals may include those of atomic numbers 57 and 71, or whether the Ar unit is bonded to M. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced

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by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1, 9, 12 and 13 recite the broad recitation "rare earth metal", and the claims also recite "having an atomic number of between 57 and 71" which is the narrower statement of the range/limitation.

Further in claim 9, the formula in l. 3 appears to be incorrect with respect to the subscripts on the aluminum group. Likewise for claims 12 and 13.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 3, 7, 14 and 17 recite the broad recitation "halogen atom", and the

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claims also recite "fluorine, chlorine, bromine and iodine", which is the narrower statement of the range/limitation.

In claims 7, 8, 17 and 18, boron is recited as being metal, but it has no metallic properties whatsoever.

In claims 14, 16 and 17, the claims are recited as depending from "one of claims x to y (sic)", hence it is not clear from which claims these claims depend. If applicants ^{want} ~~with~~ them to depend from all the claims recited, "either of" is correct for two claims, and "any of" is correct for more than two claims.

In claims 14, 16, 19 and 20, it is not clear when in the processes these additional steps are to be performed.

9. Claims 1-20 are objected to because of the following informalities: in claims 1, 3, 7, 9, 12, 13, 14 and 17, the proper terminology for a closed Markush group is "selected from the group consisting of", not "selected from among". In claims 1, 9, 12 and 13, reciting that M is a rare earth metal, then giving the range of atomic numbers of the rare earth metals is redundant. In claim 3, l. 2, correct the subscript "n" on X. In claim 7 it is not clear what the symbol after Z in l. 6 means. In claims 9, 12 and 13, correct the spelling of fluorine and chlorine. In claim 14 "may range from" makes it unclear if the actual range is from 0 to 3. In claim 17, correct the spelling of "from" in l. 3. In claim 18, l. 2, change "or" to --and--. Appropriate correction is required.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hu et al., Chinese Science Bulletin, vol. 37, no. 7, pp. 566-570 (hereafter referred to as Hu) in view of WO 92/17510 (hereafter referred to as Jones).

Hu discloses a catalyst reading on that of the present claims (abstract).

Hu lacks disclosure of supporting the catalyst or how the supported catalyst is made.

However, Jones teaches that lanthanide catalysts having pi-arene ligands as contained in Hu's catalyst may be supported on inorganic oxide supports as well as methods of making such catalysts (abstract; pp. 4-5; examples).

It would have been obvious to one of ordinary skill in the art to apply the teaching of Jones to the disclosure of Hu with a reasonable expectation of obtaining a highly-useful diene polymerization catalyst and method of making it with the expected benefit of being able to use the catalyst in gas phase and slurry phase polymerizations.

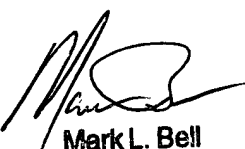
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached on (703) 308-3823. The fax phone number for the organization where

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this application or proceeding is assigned is (703) 872-9310 for normal faxes, 872-9311 for after final faxes.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700



J. Pasterczyk

4/18/03